Medcalc 12.5.0.0 (USA), including standard methods of parametric and nonparametric analysis. Differences were considered significant at $p < 0.05$.

Results: Levels and frequency of occurrence of anti-RA33, anti-CCP, RF IgM and anti-Sa were analysed for the examined patients depending on disease duration. Patients were divided into two groups: patients with early RA (disease duration less than 12 months) and patients with established RA (disease duration over 12 months). In the analysis it was found that the incidence of anti-Sa in established RA are much higher in comparison with the early RA (77.98% vs. 52.00% respectively, $p < 0.05$). The levels of anti-Sa autoantibodies were lower in early RA than in established RA 21,57 U/L; 95% CI 12,10–27,42 vs. 33,10 U/L; 95% CI 27,58–37,71 respectively, $p < 0.05$). Frequency of occurrence of anti-CCP and RF IgM is no different in the early and developed stage of RA. The frequency of occurrence of anti-RA33 in early RA was higher than in established RA (52.00% vs. 32.45% respectively, $p < 0.05$).

Conclusions: Thus, anti-RA33 is a perspective independent biomarker of RA, which has its own potential. Further study of the anti-RA33 as a diagnostic biomarker of early stage RA is promising. Based on preliminary studies the anti-RA33 could have diagnostic and prognostic value in diagnosis and evaluation of patients with early RA, and its differentiation from other small joint disorders, particularly when the other serologic tests are negative.

To clarify the diagnostic and pathogenic value of anti-RA33 further research with a large sample size, comparison of immunological data with genetic factors, the results of other laboratory and instrumental studies, clinical manifestations of the disease are required. The obtained data will allow us to more thoroughly study the pathogenesis of RA and contribute to the search for new therapeutic options.

Disclosure of Interest: None declared

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AB0369 ADULT-ONSET STILL'S DISEASE TREATMENT PREDICTORS AT 1-YEAR FOLLOW-UP IN A SINGLE RHEUMATOLOGIC CENTRE EXPERIENCE

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Background: Adult-onset Still's disease (AOSD) is a rare systemic inflammatory disorder mainly characterised by persistent high spiking fevers, evanescent rash, and joint involvement. Data on the efficacy of biologic therapy in the management of AOSD¹ is increasing and represents a breakthrough in the management of patients with AOSD refractory to corticosteroids (CS) or conventional (c) DMARDs.

Objectives: We aimed to evaluate possible predictor on the need to use a biologic agent in the management of AOSD patients.

Methods: In this retrospective monocentric study we evaluated AOSD patients followed in our outpatient's clinic since 2010 with at least 1 year follow-up. Clinical manifestations, joint involvement, CS and c- or bDMARD use were main outcome measures. T-test or ANOVA and Chi-squared were used to compare continuous or categorical data, when appropriate, and the odds ratio (OR) for which condition had an influence on clinical outcome was calculated.

Results: We evaluated 28 AOSD patients (mean age 43 ± 14 years; median disease duration 3 (95%CI 2.5–17.3) months). All patients at baseline were treated with a median CS of 18.7 (95%CI 14.3–24.8) mg/die prednisone equivalent dose, and median methotrexate (MTX) dose of 15 (95%CI 13.4–16.28) mg/week. After 1 year follow-up, in the 8 patients (28.6%) that needed to start a bDMARD (4 anti-IL1; 3 anti-IL6 and 1 anti-TNF), we observed that baseline joint involvement was the more prevalent manifestation of the disease with higher DAS28 compared to those patients still on CS +MTX (DAS28 3.8 ± 1.2 vs 2.8 ± 1.1 , respectively $p = 0.03$). Moreover, we showed that clinical manifestations of systemic involvement (i.e. fever, rash, organomegaly and anaemia) were associated with a protective risk to start a bDMARD at 1 year (OR 0.4 95% CI 0.2–0.76). Consistently, in those patients with concomitant elevated ESR (> 20 mm/h), CRP (> 15 mg/L) and ferritin (> 250 ng/ml) levels at baseline, we observed a low risk to start a bDMARD at 1 year follow-up (OR 0.4 95% CI 0.18–0.87).

Conclusions: In our cohort about one third of AOSD patients required to be treated with a bDMARD at 1 year follow-up, mainly if joint involvement was the predominant clinical manifestation at disease onset. Systemic manifestations of the disease seem to benefit from high dose CS+MTX combination therapy. Further studies with more extensive cases are necessary.

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AB0370 LOW SERUM IGF1 IS ASSOCIATED WITH HIGHER CARDIOVASCULAR RISK IN THE MIDDLE-AGED WOMEN WITH RHEUMATOID ARTHRITIS INDEPENDENTLY OF THE DISEASE RELATED PARAMETERS

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Objectives: To analyse the relation between serum levels of IGF1 and cardiovascular risk (CVR) in women with rheumatoid arthritis (RA).

Methods: The risk of dying of CV disease within 5 years was calculated using the strategy proposed by Pocock et al. BMJ 2001 in 185 women with RA (mean age 51.7 years) with no previous history of CV events. The CVR and characteristics related to it were analysed with respect to serum IGF1. IGF1 levels below the median of the total cohort were considered low.

Results: The RA women with low IGF1 ($n = 91$, mean 104 pg/ml) had significantly higher CVR compared to those with normal IGF1 ($n = 94$, mean 194 pg/ml) with the predicted risk of 0.51% and 0.17%, respectively ($p > 10^{-5}$). Among the traditional CVR factors, the low IGF1 group was 10 years older (mean 56.8 vs. 46.9 y, $p = 10^{-5}$), lower in height (165 vs. 168 cm, $p = 0.013$, 21% of the patients being < 160 cm) and had high prevalence of hypertension (24% vs. 8.5%, $p = 0.004$), while current smoking was similar between the groups (15% vs. 14%).

The low IGF1 group displayed the unfavourable metabolic profile with higher BMI ($p = 0.002$) and obesity in 22%, higher predicted body fat content (mean 39.5 vs. 35%, $p = 10^{-5}$), and higher total and LDL cholesterol ($p = 0.0014$ and $p = 0.0053$, respectively). The levels of adiponectin ($p = 0.032$) and HDL-cholesterol ($p = 0.25$) tended to be higher in the low IGF1 group, which resulted in the comparable total cholesterol to HDL ratio between the groups. This could also explain that the prevalence of diabetes mellitus and metabolic syndrome were low.

With exception of the disease duration, the groups displayed no significant difference in the RA-related CVR factors such as the disease activity measured by DAS28 (3.29 vs 2.99), systemic inflammation measured by serum IL6 (mean 8.46 vs. 5.99 pg/ml) and IL1 β (mean 19.47 vs. 23.1 ng/ml), and the prevalence of seropositivity (91% vs. 92%). The prevalence of treatment with MTX monotherapy was higher in the low IGF1 group (56% vs. 39%, $p = 0.024$), while the use of TNF-inhibitors and other biologic and synthetic anti-rheumatic drugs was similar within the groups.

Conclusions: Serum IGF1 levels in the normal low range are associated with higher CVR in RA female patients. This increase in CVR seems to be independent of the RA-related characteristics. The combination of low height and hypertension argues for the important role of congenital factors in defining serum IGF1 levels in the studied RA women.

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AB0371 THE EFFECT OF CUMULATIVE EXPOSURE TO CIGARETTE SMOKING ON VASCULAR DAMAGE IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Smoking is described as a classic cardiovascular (CV) risk factor and we also know the beneficial effect on the CV system of smoking cessation. However, there is contradictory data about its effect in patients with rheumatoid arthritis (RA). It is possible that the measure of cumulative exposure to tobacco expressed in pack-year gives us more information than the smoking status.

Objectives: To explore the relation between smoking exposure, measured in pack-year, and subclinical vascular damage, mortality and vascular events in patients with RA.

Methods: Observational ambispective study. We included, consecutively, RA patients controlled in a tertiary hospital. We gathered demographic (sex, age, body mass index [BMI]), clinical (characteristics of RA, classic CV risk factors and history of vascular events) and analytical variables (CRP, ESR). We estimated the modified SCORE. We explored the extracranial branches of the carotid artery

with an Esaote MyLab70XVG ultrasound device with a linear probe (7–12MHz) and an automated program measuring intima media thickness (IMT) by radiofrequency ("Quality intima media thickness in real-time, QIMT"), and registered the presence of atheroma plaques (per Mannheim consensus). We determined pulse wave velocity (PWV) by a validated MobilOGraph device. We considered as pathological an IMT >900 μ and a PWV ≥ 10 m/s and the presence of plaque and/or pathological IMT. We prospectively collected mortality and the development of new vascular events over four years and the current smoking status and exposure calculated in pack-year. Statistical analysis was performed using SPSS 17.0 software.

Results: We included 198 patients, excluding 15 because of previous CV events. The mean age was 66.5 years (SD 13.44) 76% were women and the mean BMI was 27.35 (SD 4.82). 31.1% were smokers, 43.2% hypertensive, 47.5% dyslipemic and 10.4% were diabetic. The mean duration of RA was 19.95 years (SD 11.88). 76.5% of patients were seropositive and 75.4% had erosions. The mean CRP and ESR were 9.51 mg/L (SD: 32.29) and 13.83 mm/h (SD:14.26), respectively. The mean modified SCORE was 1.81 (SD: 1.81). Regarding the vascular study, 48.1% had atheroma plaques, 32.2% a pathologic PWV [mean value of 9.13 (SD 2.12)], and 16.7% had a pathologic IMT [mean value of 748 μ (DE 168.73)].

31.1% of the patients (57) were smokers or former smokers. The average pack-year was 24.17 (SD: 21.37). No relation was found between current or previous use of tobacco and any of the outcome measures described. However, when considering cumulative exposure to tobacco, there was a trend to correlate with higher values of PWV ($p=0.07$) and a higher plaque presence ($p=0.089$) was detected. After 4 years of follow-up, 3 deaths were recorded among smoking patients, but a higher incidence of CV events was not detected in relation to cumulative exposure to tobacco ($p=0.99$).

Conclusions: The quantification of the exposure by pack-year of cigarette smoked could give us more information about vascular damage in patients with RA. The limitation of our study is the small number of smokers in the time they were followed.

Disclosure of Interest: None declared

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AB0372 LEFT ATRIAL FUNCTION IN RHEUMATOID ARTHRITIS PATIENTS

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Background: Rheumatoid arthritis (RA) is a common autoimmune systemic inflammatory disease affecting approximately 1% of the worldwide population. The interaction of genetic and environmental factors results in a cascade of immune reactions, which ultimately lead to the development of synovitis, joint damage, and structural bone damage.¹

The importance of the left atrium in cardiovascular performance has long been acknowledged. Quantitative assessment of left atrial (LA) function is laborious, requiring invasive pressure-volume loops and thus precluding its routine clinical use. In recent years, novel postprocessing imaging methodologies have emerged, providing a complementary approach for the assessment of the left atrium. Atrial strain and strain rate obtained using either Doppler tissue imaging or two-dimensional speckle-tracking echocardiography have proved to be feasible and reproducible techniques to evaluate LA mechanics.²

Objectives:

1. To screen cardiac affection in rheumatoid arthritis patients
2. To assess subclinical echocardiography affection in RA patients

Methods: 30 healthy control, and 45 RA patient subjected to full clinical assessment, DAS 28 ESR score, full laboratory evaluation, conventional and tissue Doppler imaging (TDI) and strain (S) and strain rate (SR) analysis by two-dimensional speckle tracking of the left atrium.

Results: we found statistically significant difference in 2 Left atrial PEF, 2 Left atrial EI, 2 Left atrial TEF, TDI mitral lateral annulus e', TDI mitral lateral annulus S, Average SR E 1/s between patients and controls, and negative correlation between TDI lateral e, TDI lateral s, and Strain rate e and rheumatoid factor, There was negative correlation between 2LA PEF, 2LA EI, and 2LA TEF. Rheumatoid factor is correlated to strain rate e, and negatively correlated with left atrial passive emptying

Conclusions: RA had alteration in left LV longitudinal myocardial function, left atrial expansion volume can be a predictor of AF in RA. RA patient had more left atrial stiffness. Our study concluded cardiac affection is more in seropositive RA patients.

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AB0373 SARCOPENIA COULD NOT PREDICT FALLS IN PATIENTS WITH RHEUMATOID ARTHRITIS FROM THE CHIKARA STUDY

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Background: The falls ratio is higher among patients with sarcopenia than among healthy individuals. We reported that the prevalence of sarcopenia was 28% and locomotive syndrome (locomo) was 52% in patients with rheumatoid arthritis (RA)¹. Whether patients with RA complicated by sarcopenia show a higher ratio of falls compared to those without sarcopenia remains unclear.

Objectives: We investigated events of falls and fractures, and predictors of those events in patients with RA.

Methods: We used data from a prospective observational study (CHIKARA study, UMIN000023744) started in 2016. Sarcopenia was diagnosed using the criteria of the Asia Working Group on Sarcopenia². We counted the number of patients and events of falls and fractures they had per year[A1], and investigated correlations between those events and disease activity, body composition and sarcopenia. Predictors at baseline influencing those events were analysed by uni- and multivariate analysis.

Results: Participants comprised 100 patients with RA (females, 78%; mean age, 66.1 years). Falls occurred in 21 patients (19 women), as 33 events (mean, 2 times/patient). Fractures occurred in 4 patients (4 women), as 5 events. Table 1 shows predictors for falls, with positive correlations for bone mass index, obesity level, fat percentage, and loco, and negative correlations for height, trunk muscle mass, and grip strength. No relationships were seen between falls and CRP, DAS28ESR, skeletal muscle mass, and sarcopenia. Height (odds ratio, 0.912; $p=0.003$) and obesity level (odds ratio, 1.04; $p=0.006$) were independent predictors by multivariate analysis (table 1). In terms of fracture events, falls was the only predictor ($r=0.469$, $p=0.001$).

Abstract AB0373 – Table 1. Predictors of falls in patients with RA

	Univariate		Multivariate		
	R	P	Odds ratio	95% CI	P
Body mass index	0.195	0.040			
Obesity revel	0.194	0.040	1.040	1.011–1.069	0.006
Fat percentage	0.211	0.025			
Locomotive syndrome	0.237	0.012			
Height	–0.263	0.005	0.912	0.858–0.968	0.003
Trunk muscle mass	–0.188	0.048			
Grip strength	–0.198	0.036			
CRP	0.063	0.512			
DAS28ESR	–0.008	0.932			
Skeletal muscle mass	0.091	0.337			
Sarcopenia	–0.093	0.327			

Conclusions: Falls have been reported as significantly more frequent with sarcopenia. However, no relationship was seen between fall events and sarcopenia in this study. We may need to evaluate not only skeletal muscle mass, but also muscle function to predict falls.

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